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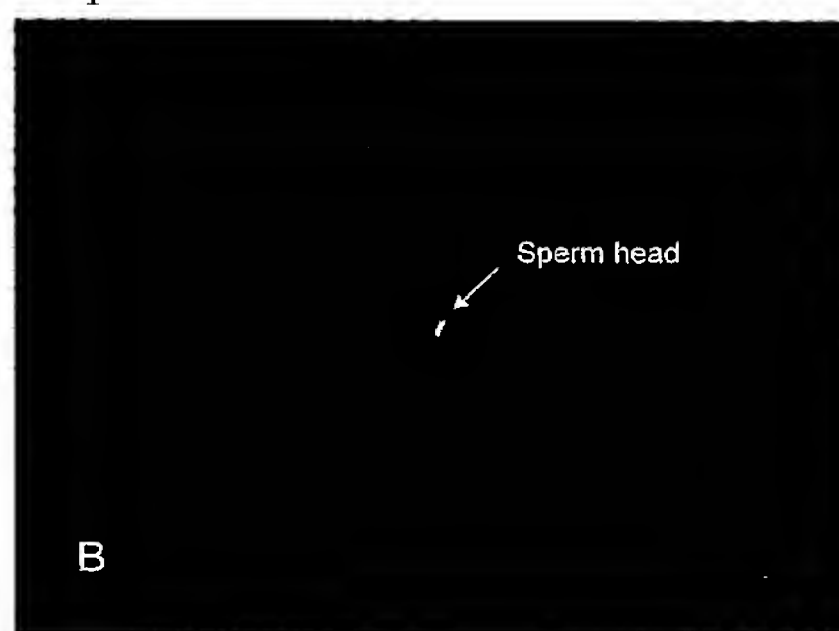
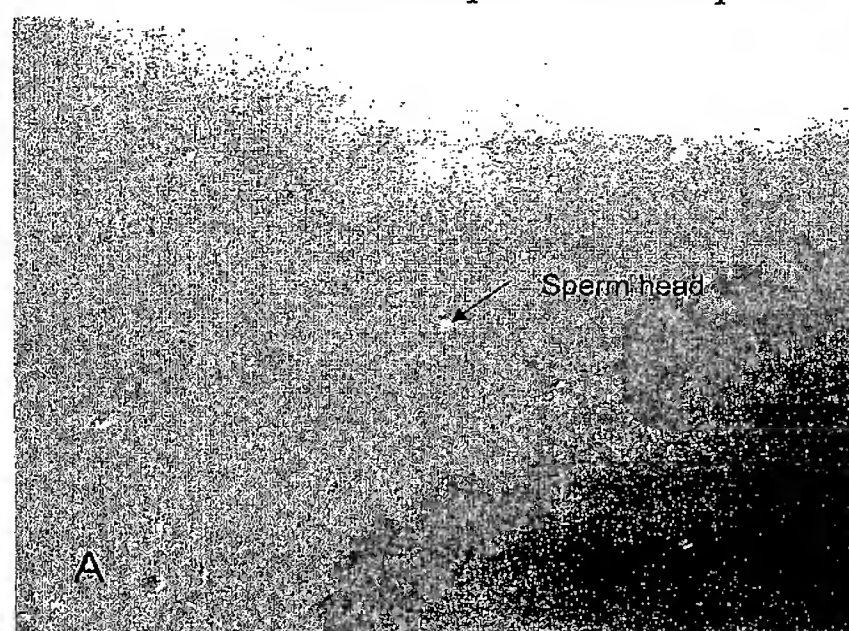
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(54) Title: COMPOSITIONS AND METHODS FOR IDENTIFYING SPERM FOR FORENSIC APPLICATIONS

ESP mAb 3C6 conjugated to AlexaFluor 488
identifies sperm head in post-coital sample eluted from cotton swab.



Phase contrast (A) and immunofluorescent image (B). Anti-ESP mAb stains the equatorial segment of a sperm
eluted from a post coital sample. The equatorial segment staining pattern is a distinctive band across the mid-region of the
sperm. Other biological material in this field is not stained with the antibody so that the sperm head is clearly visible against
a dark background.

The post coital sample was collected with a cotton swab one hour after intercourse, dried and stored at 4°C for
approximately two years. Swabs were rehydrated with PBS. Cells and other material released from swab were spotted on
microscope slides and stained with fluorescently labeled antibody according to standard protocol (see appendix).

(57) Abstract: Methods and compositions for identifying and isolating sperm cells from samples containing multiple cell types are described. The methods and compositions employ antibodies that specifically bind to sperm-specific antigens located on or internal to the sperm plasma membrane. A reporter molecule may be conjugated to the antibodies to aid in the detection of sperm. The antibodies may be targeted to sperm-specific antigens in the head and/or tail of sperm to facilitate the identification and isolation of sperm cells from forensic samples prepared from sexual assault evidence. Purified DNA from the isolated sperm cells can be amplified by polymerase chain reaction to assist forensic analysis in sexual assault cases.

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